**Remarks**

This Amendment is in response to the Office Action dated September 18, 2009. The Office Action rejected claim 30 under 35 USC § 112, second paragraph; rejected claim 31 under 35 USC § 102(b) over Dillon (US 4,849,285); rejected claims 3, 21, 22, 29, and 30 under 35 USC § 103(a) over Houser (US 6,361,559) in view of Clapper (US 5,744,515); rejected claim 2 under 35 USC § 103(a) over Houser in view of Clapper in further view of Chuter (US 6,293,969); and rejected claims 24, 27, and 28 under 35 USC § 103(a) over Freiburger (US H1978 H).

Claims 3, 24, and 30 are herein amended as shown above. Support for claim 3 can be found in the Specification at least in paragraph [0043] of the Published Application and in the Application as-filed. Support for claim 24 can be found in the Specification at least in paragraph [0037] of the Published Application and in the Application as-filed.

Applicant wishes to call to the attention of the Examiner copending US application 10/858589 (published as US 20040220659). Application 10/858589 is a continuation of US 6770086. The instant application is a continuation-in-part of US 6770086. These references have been listed in the accompanying IDS.

In light of the foregoing amendments and following comments, Applicants request withdrawal of the rejection.

**Claim Rejections – Section 112**

In the Office Action, claim 30 was rejected under § 112, second paragraph for failing to provide proper antecedent basis for the phrase "said dissolving medium." Claim 30 is herein amended to replace "said" with "a". In light of this amendment, the rejection is believed moot.

**Claim Rejections – Section 102**

In the Office Action, claim 31 was rejected under § 102(b) over Dillon. This rejection is *traversed*.

Claim 31 uses the transitional phrase "consisting essentially of". The addition and removal of sodium chloride in the biomaterial of Dillon renders the

biomaterial of Dillon outside Applicants claimed invention because Applicants' claim is limited to "the specified materials or steps 'and those that do not materially affect the basic and novel characteristic(s)' of the claimed invention." MPEP § 2111.03 (quoting *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original)).

The fact that Dillon discloses including and removing a salt (NaCl) from the biomaterial makes Dillon materially different from "the basic and novel characteristics" of Applicants' claimed invention. Specifically, at least one novel characteristic of Applicants' claim 31 is that claim 31 recites, in-part, "wherein discrete domains of said polymeric component are distributed throughout said non-expanded PTFE resin and are extractable therefrom to create pores in said PTFE resin." The presence of and removal of NaCl from the biomaterial of Dillon is materially different from this aspect of Applicants' claim. The inclusion of NaCl in the Dillon material results in a pore structure, upon extraction, which differs from that which results from the material of the instant claim. Thus, the inclusion of salt in the Dillon material removes the Dillon material from the scope of claim 31.

Consequently, Applicants request withdrawal of the rejection of claim 31.

**Claim Rejections – Section 103**

Claims 3, 21, 22, 29, and 30

In the Office Action, claims 3, 21, 22, 29, and 30 were rejected under § 103(a) over Houser in view of Clapper.

Claim 3 is herein amended to recite, in-part, "wherein upon exposure to sufficient dissolving medium or degradation temperature . . . said tubular extrude has a bulk density of between 0.2 and 0.5 g/cc." Neither Houser nor Clapper teach or suggest such a tubular extrudate.

With respect to the Office Action's rejection, the Office Action relies on the following lines of Houser (Column 7, lines 3-7):

> [s]ynthetic bypass grafts may be manufactured by extruding, injection molding, weaving, braiding, or dipping polymers such as PTFE, expanded PTFE, urethane, polyamide, nylon, silicone, polyethylene, collagen, polyester or composites of these representative materials.

In this regard, the Office Action states:

> It therefore would have been obvious for one of ordinary skill in the art to have provided for an extruded composite of silicone and PTFE, therefore an interpenetrating network of silicone and PTFE, as the group disclosed by Houser et al includes silicone and PTFE. Houser et al therefore disclose an interpenetrating polymer network having discrete domains of the silicone distributed throughout the PTFE that are extractable from the PTFE to create pores…

This rejection is *traversed*. Houser does not disclose, teach, or suggest an interpenetrating network. At most, Houser teaches a composite of the listed materials. As discussed in Applicants previous response dated September 4, 2009, which is herein incorporated by reference, nothing in the above passage of Houser would teach or suggest an IPN to one of ordinary skill in the art. Indeed, an IPN is more than a mere blend or mixture of materials. And, an IPN does not naturally result simply because a composite material includes a plurality of polymers. Conversely, an IPN is formed by:

> an intimate combination of two polymers both in network form, at least one of which is synthesized or cross-linked in the immediate presence of the other. Unlike chemical blends, there are no induced covalent bonds between the two polymers; monomer A reacts only with other molecules of monomer A, as does B.

*Concise Encyclopedia of Polymer Science and Engineering*, 489 (Jacqueline I. Kroschwitz et al. eds., 1990). (A copy of the above-referenced page is included herewith in the accompanying Appendix). There does not appear to be any teaching or suggestion in Houser regarding the presence of an IPN, as is claimed.

Moreover, the Office Action has provided no support for the proposition that merely because PTFE is disclosed, forming an IPN out of it would have been obvious. Indeed, what is required to establish a *prima facie* case of obviousness under 35 USC § 103(a) is a "clear articulation of the reason(s) why the claimed invention would have been obvious." MPEP § 2142. As further stated in MPEP § 2142:

> [t]he Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 418, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006).

MPEP § 2142 also requires that the Office Action provide factual support in making out a case of

*prima facie* obviousness. The Office Action has failed to articulate how it is believed that Houser naturally discloses an IPN or teaches or suggests an IPN. In addition, the Office Action has failed to establish a *prima facie* case of obviousness.

Finally, any alleged teaching of Clapper does not remedy the deficiencies of Houser. As such, neither Clapper nor Houser, whether considered independently or in combination, teach or suggested what is claimed in independent claim 3. As such, Applicants request withdrawal of the rejection thereof.

Claims 21, 22, 29, and 30 depend from claim 3. These claims are therefore patentable for at least the reasons discussed with respect to independent claim 3. As such, Applicants request withdrawal of the rejection of claims 21, 22, 29, and 30.

Claim 2

In the Office Action, claim 2 was rejected under § 103(a) over Houser in view of Clapper in further view of Chuter. This rejection is *traversed*.

Dependent claim 2 depends from independent claim 3 and Chuter does not remedy the deficiencies of Houser and Clapper as discussed above with respect to claim 3. As such, Applicants request withdrawal of the rejection.

Claims 24, 27, and 28.

In the Office Action, claims 24, 27, and 28 was rejected under § 103(a) over Freiburger. Claim 24 is herein amended to recite that the PTFE extrudate is tubular. Freiburger does not teach or suggest such a configuration. Indeed, Freiburger discloses "monolithic films." *See, e.g.*, Title of Freiburger. As such, Applicants request withdrawal of the rejection of independent claim 24.

Claims 27 and 28 depend from claim 24 and are therefore patentable for at least the reasons discussed with respect to claim 24. As such, Applicants request withdrawal of the rejection.

**Conclusion**

Based on at least the foregoing remarks, Applicants request withdrawal of the rejections and allowance of claims 2, 3, 21, 22, 24, and 27-31. Favorable consideration and prompt allowance of these claims is earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

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determine surface chemical structure, composition depth profiles (by angle-resolved measurements), and surface orientation of polymer chains.

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## INTERNALLY COLORED COPOLYMERS.

See COLORANTS; DYES, MACROMOLECULAR.

## INTERNAL PLASTICIZER.

See PLASTICIZERS.

## INTERPENETRATING POLYMER NETWORKS

An interpenetrating polymer network (IPN) is an intimate combination of two polymers both in network form, at least one of which is synthesized or cross-linked in the immediate presence of the other. Unlike chemical blends, there are no induced covalent bonds between the two polymers; monomer A reacts only with other molecules of monomer A, as does B. A schematic representation of an ideal IPN is shown in Figure 1. In sequential synthesis, polymer A is swollen in the presence of monomer B and a cross-linking agent, and B is polymerized. In simultaneous synthesis, monomers A and B are cross-linked and polymerized by way of noninterfering modes. Thus, in addition to mechanical blending and copolymerization, IPNs represent a third mechanism by which different polymers can be combined.

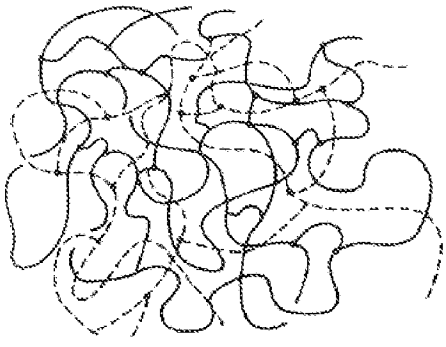

Figure 1. Ideal interpenetrating polymer network (IPN): —, polymer A; —, polymer B.

The chemical and physical combination of two or more structurally dissimilar polymers provides a convenient route for the modification of properties to meet specific needs. It facilitates processing and may impart flexibility, tensile and impact strength, chemical resistance, weatherability, flammability resistance, or other properties. The physical properties of the combined polymers depend on the properties of the polymers and the way they are combined.

An IPN is distinguished from simple polymer blends, blocks, or grafts in two ways: it swells but does not dissolve in solvents, and creep and flow are suppressed.

In sequential interpenetrating polymerization, monomer I is combined with cross-linking agent and initiator to form network I. Network I is then swollen in monomer II containing cross-linking agent and initiator to form network II (Fig. 2a). Simultaneous interpenetrating networks (SINs) (Fig. 2b) are synthesized by combining monomers or linear prepolymers of the two monomers together with their respective cross-linking agents and catalysts, in bulk (melt), solution, or dispersion. The individual monomers are polymerized by chain or stepwise polymerization. Reaction between the polymers is usually prevented due to the different polymerization modes. If one of the two polymers is in network form (cross-linked) and the other a linear polymer, not cross-linked, a semi-IPN results (Fig. 2c). If the polymerizations are sequential in time, four semi-IPNs may be distinguished. If polymer I is cross-linked and polymer

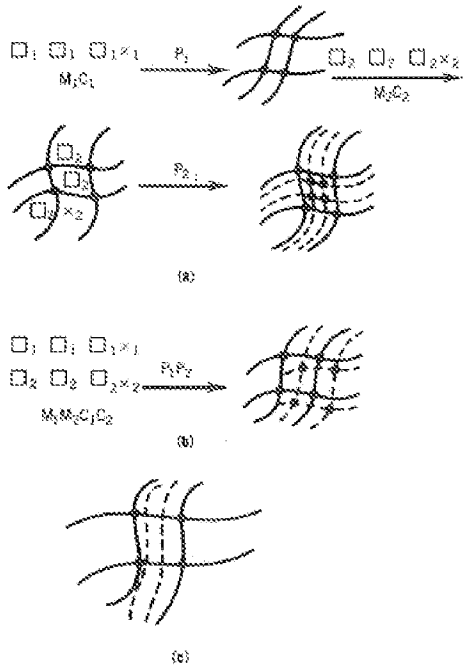

Figure 2. Synthesis of IPNs: (a) sequential IPN; (b) simultaneous interpenetrating network (SIN); (c) semi-IPN. Network I, solid lines; network II, dotted lines; cross-link sites, filled circles. M = monomer; C = catalyst; × = cross-linking agent; P = polymerization.